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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/613,577	07/02/2003	Koichi Yoshihara	7674 US	4481
30078 7590 01/11/2007 MATTHEW D. RABDAU TEKTRONIX, INC. 14150 S.W. KARL BRAUN DRIVE P.O. BOX 500 (50-LAW) BEAVERTON, OR 97077-0001			EXAMINER ZISKIND, ANNA Y	
			ART UNIT 2611	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	
3 MONTHS			01/11/2007	
			DELIVERY MODE PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/613,577

Applicant(s)

YOSHIHARA, KOICHI

Examiner

Anna Ziskind

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7-10 and 14 is/are rejected.
- 7) ☒ Claim(s) 4-6 and 11-13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 7/2/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on 7/2/03 was considered and made of record by the examiner. The Feher reference was not considered because a copy of the document was not provided.

### ***Drawings***

Figures 1-6, 11, 16, and 17 should be designated by a legend such as -- Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

The disclosure is objected to because of the following informalities: on pg. 7 of the specification, in the description of Fig. 17, the phrase "impulse response

with not inter-symbol interference" should be corrected to say, --impulse response without inter-symbol interference--. Appropriate correction is required.

### ***Claim Objections***

Claims 1-7 are objected to because of the following informalities: claim 1 recites a "modulated signal being demodulated into quadrature component signals and a symbol clock." This language is unclear because a modulated signal is not demodulated into a symbol clock, but rather the symbol clock is derived from the demodulated quadrature component signals. Appropriate correction is required.

Claims 10-13 are objected to because of the following informalities: lines 2-3 of claim 10 refer to pseudo-random symbols, whereas they should refer to pseudo-symbols.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 7, 8, 10, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 4825449 (McKissock).

As to claims 1 and 8, McKissock teaches a system for digital radio transmission analysis that includes a means for sampling the quadrature component signals received by the system, each sample representative of a point or pseudo-symbol to be displayed, and a means for displaying the points or pseudo-symbols on a quadrature plane (Col. 1, lines 30-34 and 52-68; Col. 2, lines 41-51).

As to claims 3 and 10, McKissock teaches the generation of a graticule on the system display, the graticule representing the ideal positions of samples in the incoming signal (Fig. 2, reference 32; Col. 1, lines 52-68; Col. 4, lines 35-37).

As to claims 7 and 14, McKissock teaches a feature of the displaying means that allows an operator to expand and/or contract the clusters of the constellation, a feature that is equivalent to zooming in on clusters (Col. 4, lines 43-47).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the

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art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 4825449 (McKissock) in view of US Patent 4756011 (Cordell).

McKissock teaches sampling the incoming quadrature component signals with a sample clock (Col. 3, lines 56-60). However, McKissock doesn't teach that the sample clock has a period equal to the symbol clock, but is shifted one-half period in phase with respect to the symbol clock. This type of sampling is used often in the art and accomplished with different phases of the same symbol clock, as illustrated in Cordell. Cordell teaches a digital phase aligner that samples an incoming data stream with a sample clock that is shifted by 180 degrees, or one-half period, from the symbol clock (Fig. 2B; Col. 3, lines 56-61; Col. 4, lines 55-65). Therefore, it would have been obvious to one of ordinary skill in the art to use the sampling technique taught by Cordell within the sampling function taught by McKissock. Doing so would allow the system to better capture the movement of the incoming waveform and its synchronization, or lack thereof, with the sampling clock.

### ***Allowable Subject Matter***

Claims 4-6 and 11-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The

following is a statement of reasons for the indication of allowable subject matter. A search of prior art failed to teach, either alone or in obvious combination, an apparatus for displaying a modulated signal comprising means for determining a distortion index as a function of the number of pseudo-symbols that are outside a template representing an ideal modulated signal. The search further did not teach a template representing an ideal modulated signal, comprising a plurality of circles representing clusters of pseudo-symbols for each symbol of the ideal modulated signal.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anna Ziskind whose telephone number is (571) 272-2769. The examiner can normally be reached on Mon. - Fri., 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on (571) 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Anna Ziskind  
Examiner  
Art Unit 2611



CHIEH M. FAN  
SUPERVISORY PATENT EXAMINER